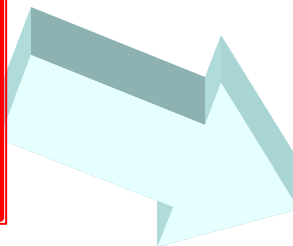




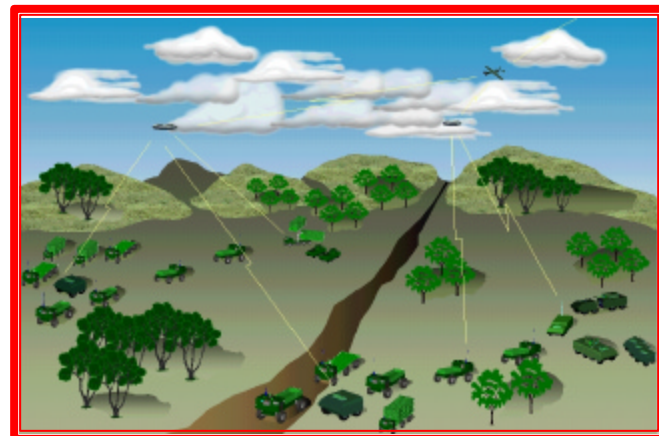
# TRANSPORTATION CORPS



*TODAY*



*TOMORROW*



*Objective Force Sustainment  
NDIA Tactical Wheeled Vehicle Conference  
27-29 January 2002  
COL Tom Feick, TSM-TWVM*



# Outline

Objective Force Sustainment

Chief of Transportation's Vision

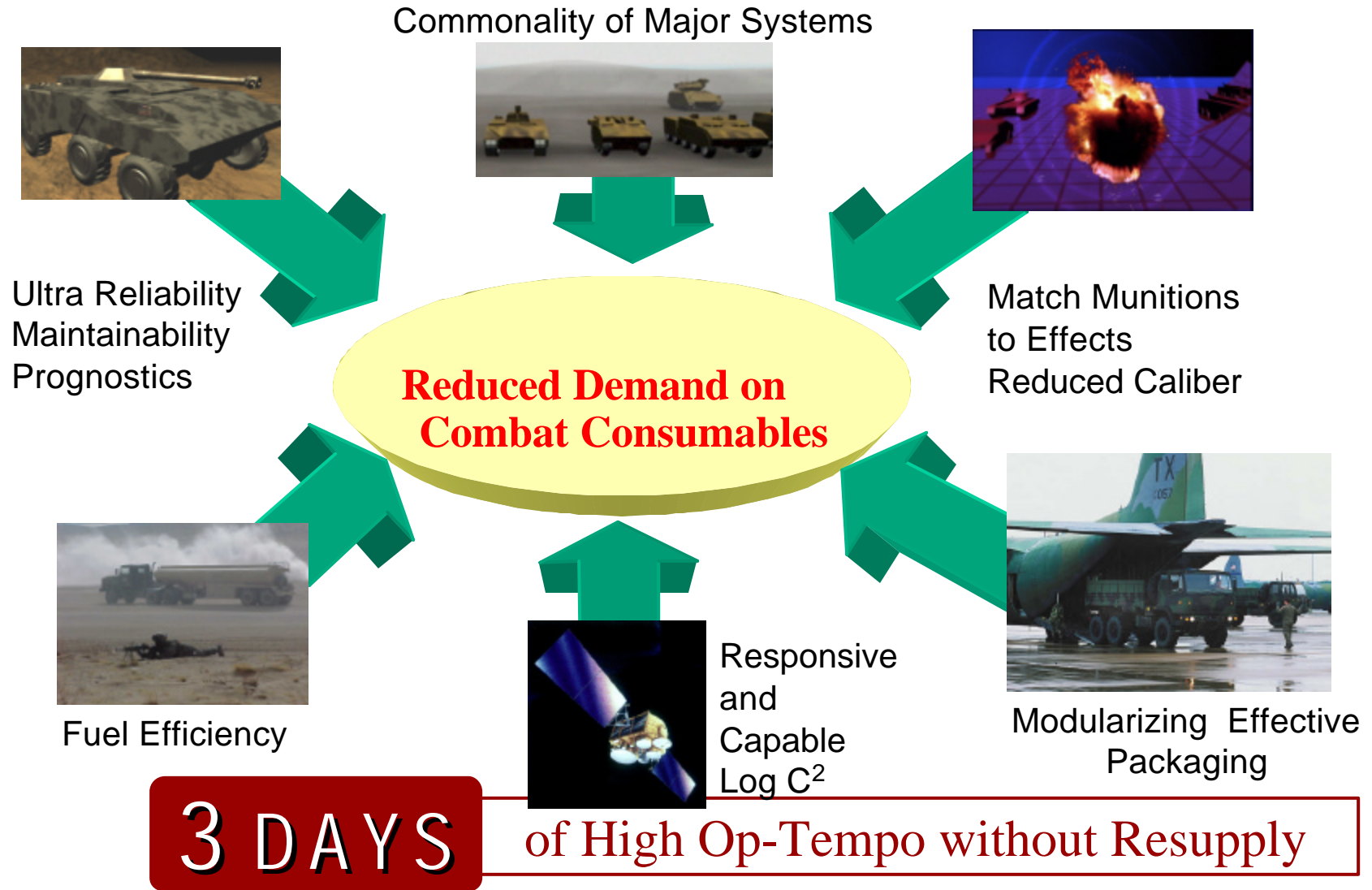
Current System Operational Shortfalls

FTTS Update

Summary

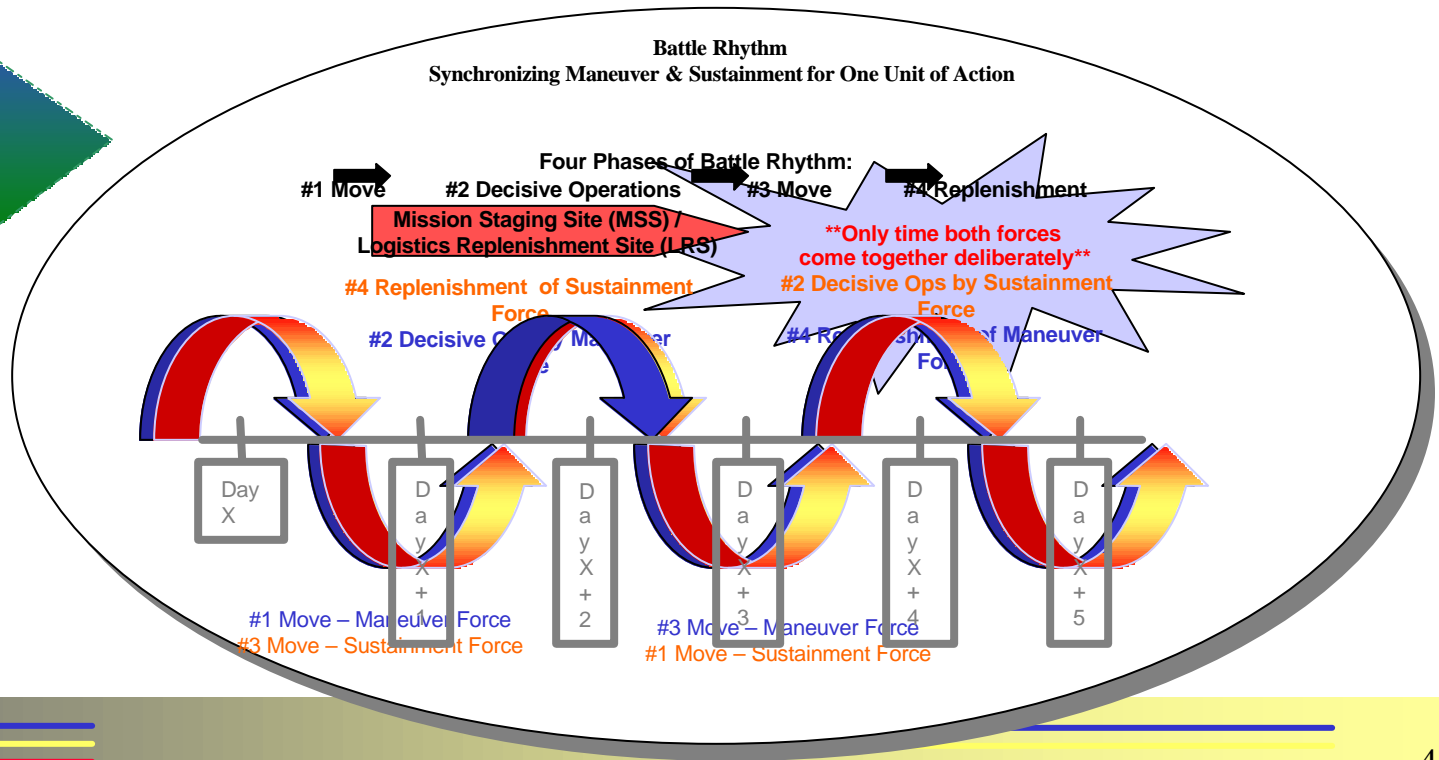
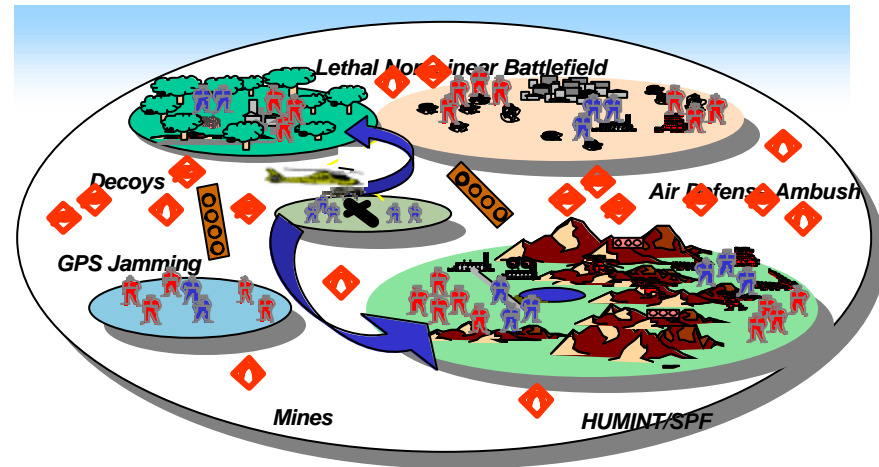


# Objective Force Sustainment



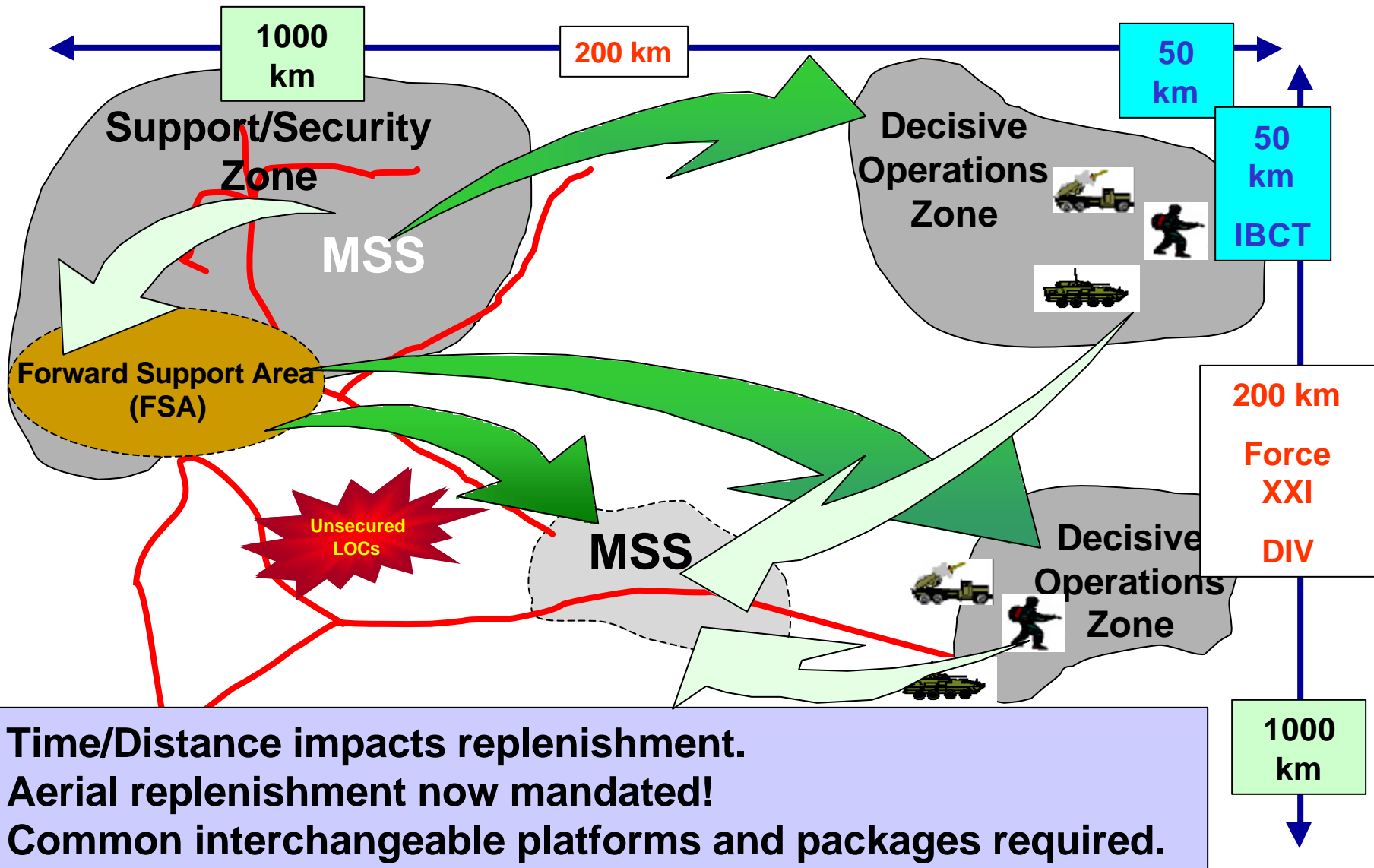


# Objective Force Environment





# Objective Force Environment (Cont.)



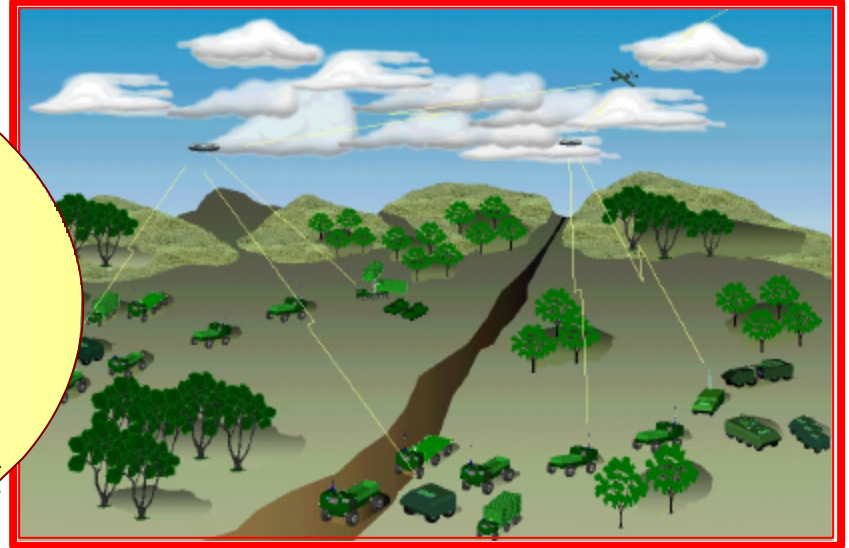


# Chief of Transportation's (COT's) Vision



## COT's top Five Enablers

- TCAIMS II/Integrated C2
- Theater Support Vessel (TSV)
- Movement Tracking System (MTS)
- Future Tactical Truck System (FTTS)
- Design and Interchangeable Packaging



- **Continuity of Distribution.**
- **Ability to rapidly redirect supplies to changing operational requirements.**
- **Support across greater distances.**
- **Refocus the weight of the sustainment effort from one discontinuous line of communications to another.**





# Current TWV Operational Shortfalls



- COMMONALITY
- INTEROPERABILITY
- IMBEDDED DIAGNOSTICS & PROGNOSTICS
- REDUCED ASL/PLL
- MAINTAIN PACE
- AGILE
- SURVIVABLE
- ORGANIC DEFENSE
- ADVANCED PROPULSION

DEVELOP ONE  
FAMILY FLEET

250,000 TWVS  
IN SERVICE  
40+ VARIANTS

## TREMENDOUS LOGISTICS FOOTPRINT

- MULTIPLE LINES OF ASL/PLL
- VARYING DEGREES OF MOBILITY
- DEPLOYABILITY DEGRADATION
- SURVIVABILITY INEPT
- LIMITED DEFENSE
- HIGH DEGREE OF LOGISTICS SUPPORT
- AGING TECHNOLOGY
- LARGE CL III CONSUMER
- NO INTEGRATION
- INSIGNIFICANT COMMONALITY AMONG FLEETS
- INEFFICIENT BATTLEFIELD DISTRIBUTION PROCESS



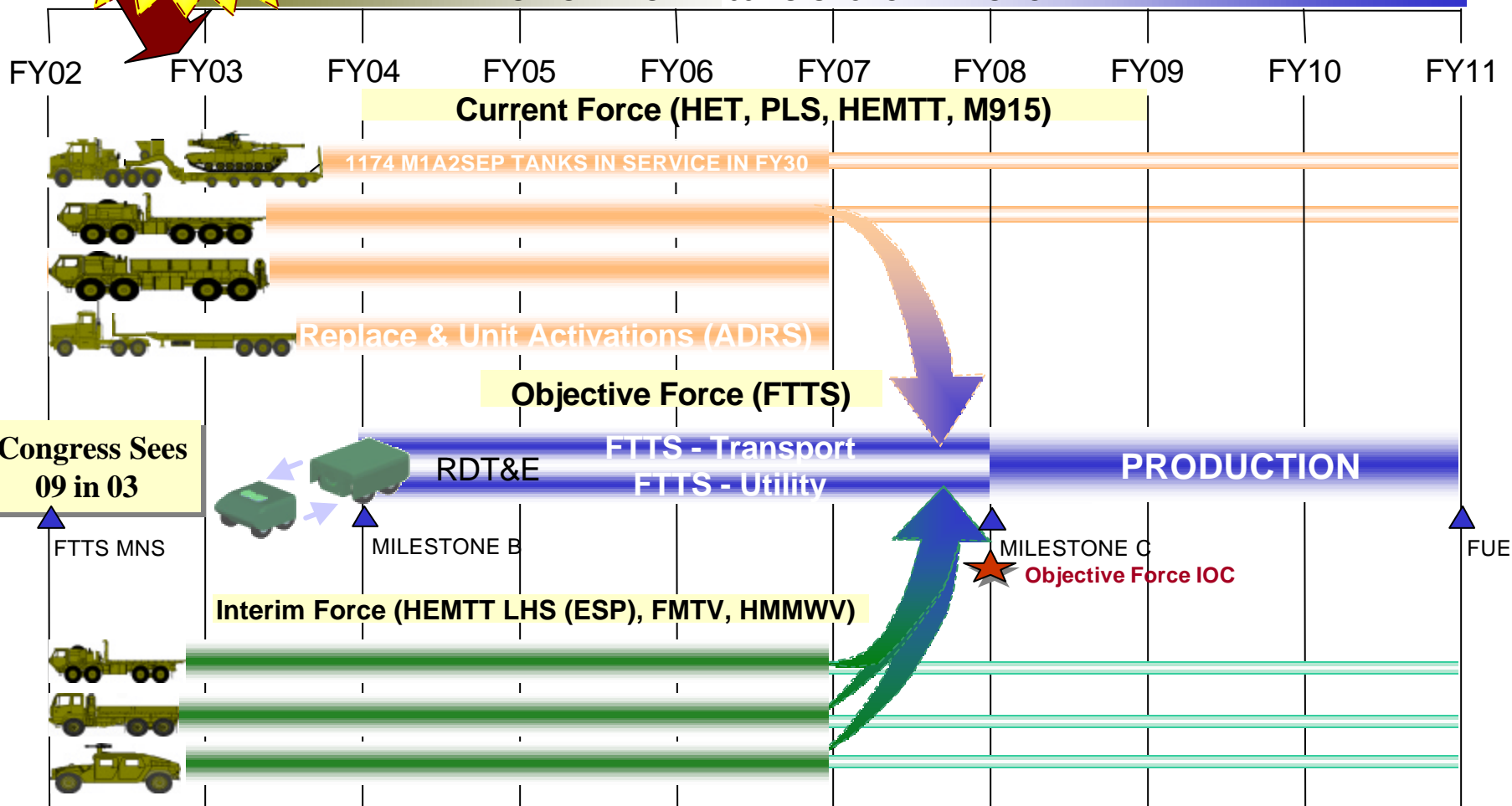
# TACTICAL WHEELED VEHICLE PROGRAM STRATEGY

**FY03 FCS Decision**

**FY03**

**OBJECTIVE**

TRANSITION FROM FY03 TO OBJECTIVE FORCE





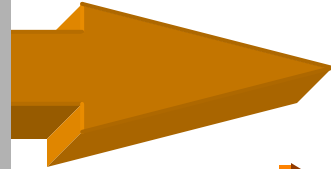


# Future Tactical Truck System Update

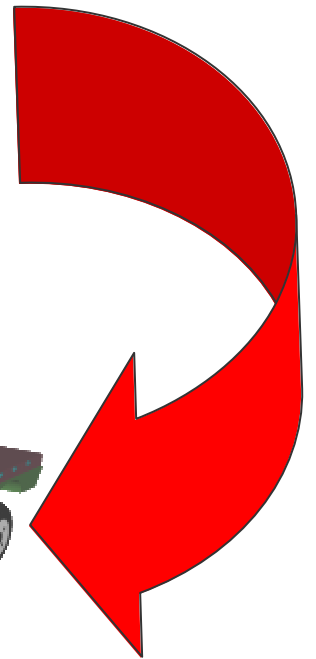
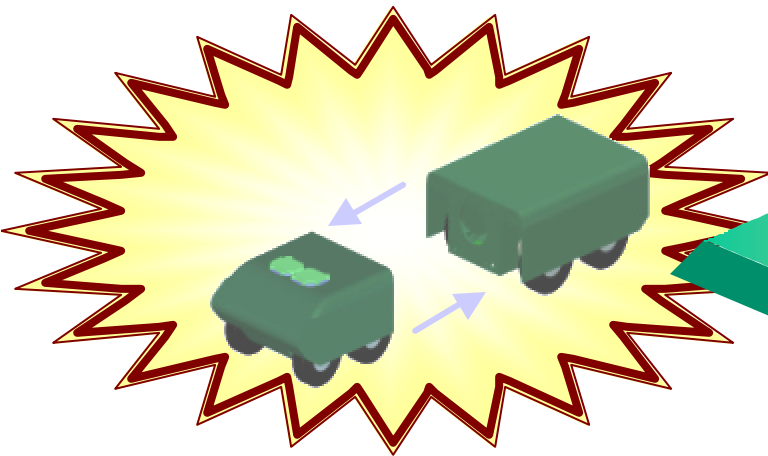


## Focus Logistics:

- On-demand transportation
- Deliver on the move
- “Know where Blue is”



Revolution In  
Tactical Wheeled Vehicle Design

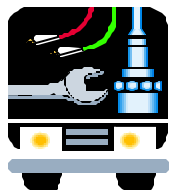




# Future Tactical Truck System Update

(continued)

## FTTS Technology Focus



### Sustainable

Automated maintenance



### Driver Task Aids

Advanced crew station  
robotics

### Fuel efficiency

- Liquid Natural Gas
- Bio Diesel
- Liquid Hydrogen
- Methanol
- Compressed Natural Gas



Advanced  
suspension

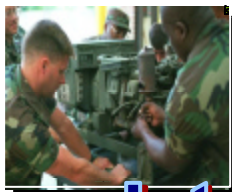
### Improved deployability



- Lighter
- Smaller Profile

### Training & Simulation

- Embedded Training & Simulation

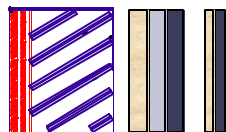


### Commonality



Heavy/Medium/Light

### Survivability



- Modular armor packages
- Cab mine protection
- NBC protection
- Defensive Aids Suite

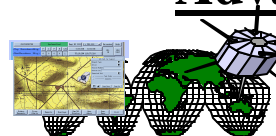
### Leader Follower Tech

- Umbilical Self Powered Trailers
- Robotic Convoys

### Power Generation

- Lithium Ion Batteries
- Hydrogen Fuel Cells
- Proton Exchange Membrane Cells

### Advanced C2 Interfaces



- GPS
  - MTS
  - Prognostics
  - RF Tags
- e.g. PowerSmart, Sensor fusion

**Integrated with our Packaging Platform Concept**

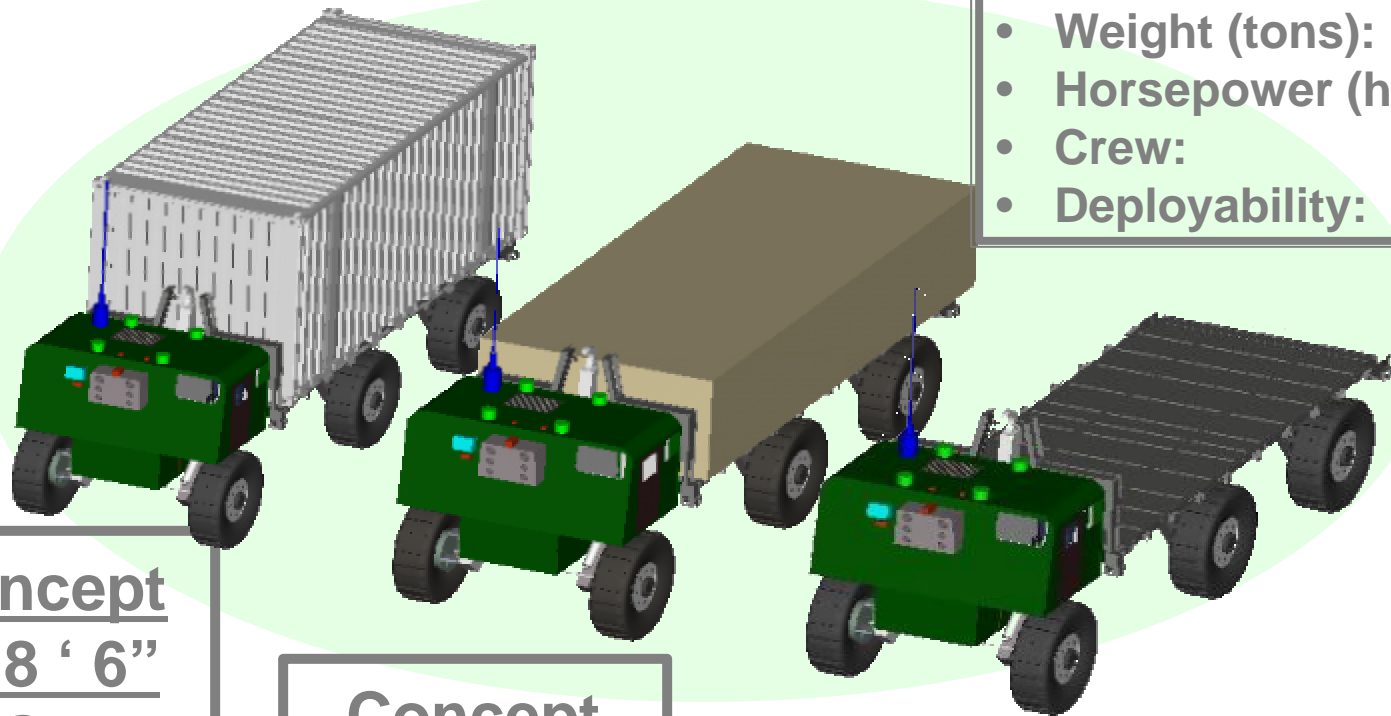


# Future Tactical Truck System Update



(continued)

## FTTS-Robotic Technology Concept



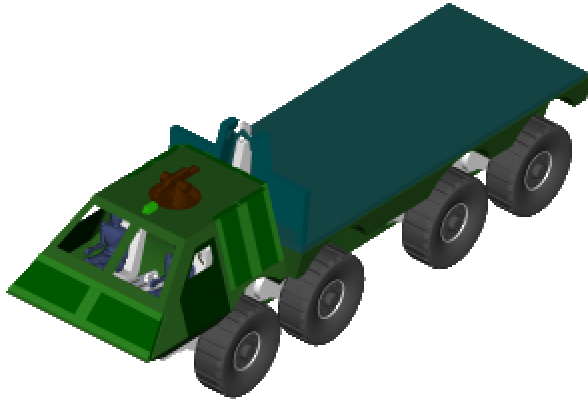
- |                    |      |
|--------------------|------|
| • Weight (tons):   | 10   |
| • Horsepower (hp): | 430  |
| • Crew:            | NA   |
| • Deployability:   | C130 |

Concept  
w/ 8 ' 6"  
ISO

Concept  
w/ 4 ' ISO



# ICT OVERVIEW



## INTEGRATED CONCEPT TEAM (ICT) (Tier one)

- **PURPOSE:** Support the Objective Force by Identifying and developing maneuver sustainment requirements for future tactical trucks.
- **SCOPE:** Determine and document the future tactical truck mission requirements across the full spectrum of DTLOMS.

## OBJECTIVES:

- Tie future truck requirements into Objective Force Concepts, Capabilities, and O&O Plans
- Conduct analysis to support acquisition documentation - link to requirements
- Identify concepts and technologies for unit mobility and distribution missions to support the Objective Force

## ICT PRODUCTS

- Scenarios
- Concept
- Draft O&O
- Mission Area Analysis
- Mission Needs Analysis
- DTLOMS Determination
- Request to generate materiel Requirements
- Simulation Support Plan



# ICT Membership

## Core Members

- COT
- TSM-TWVM
- TSM-FCS
- TWVRMO
- CASCOM
- TRADOC-DCSCD
- DA-DSPRO
- DA-DCSOPS
- DA-DCSLOG
- TRAC
- TARDEC
- NAC
- PEO-CS/CSS
- USMC CDC
- ASA(ALT)
- MTMC-TEA

## Other Staffing Agencies

- DARPA
- ACS for IM
- APAE
- ABO
- HEL
- SSC
- ARL
- USAF-TEA



## On-Call Members

- DA-DCSPER
- PM-GCSSS-A
- ATEC
- USAF-AMC
- USACAC
- USAMSC
- School DCDs
- PM-TMDE
- USACHPP-HHAP
- USA ERDC
- USA CCS
- SSC
- **INDUSTRY**
- ACADEMIA
- USASOC
- USA NGB
- USA CECOM
- USA AMED
- PEO-C3T
- PEO-CS/CSS
- PEO-IS
- DCG-ASMD
- TRAC-LEE
- AMSAA
- ATSC
- FORSCOM-DCSLOG
- SAFETY CENTER



# Ongoing Actions

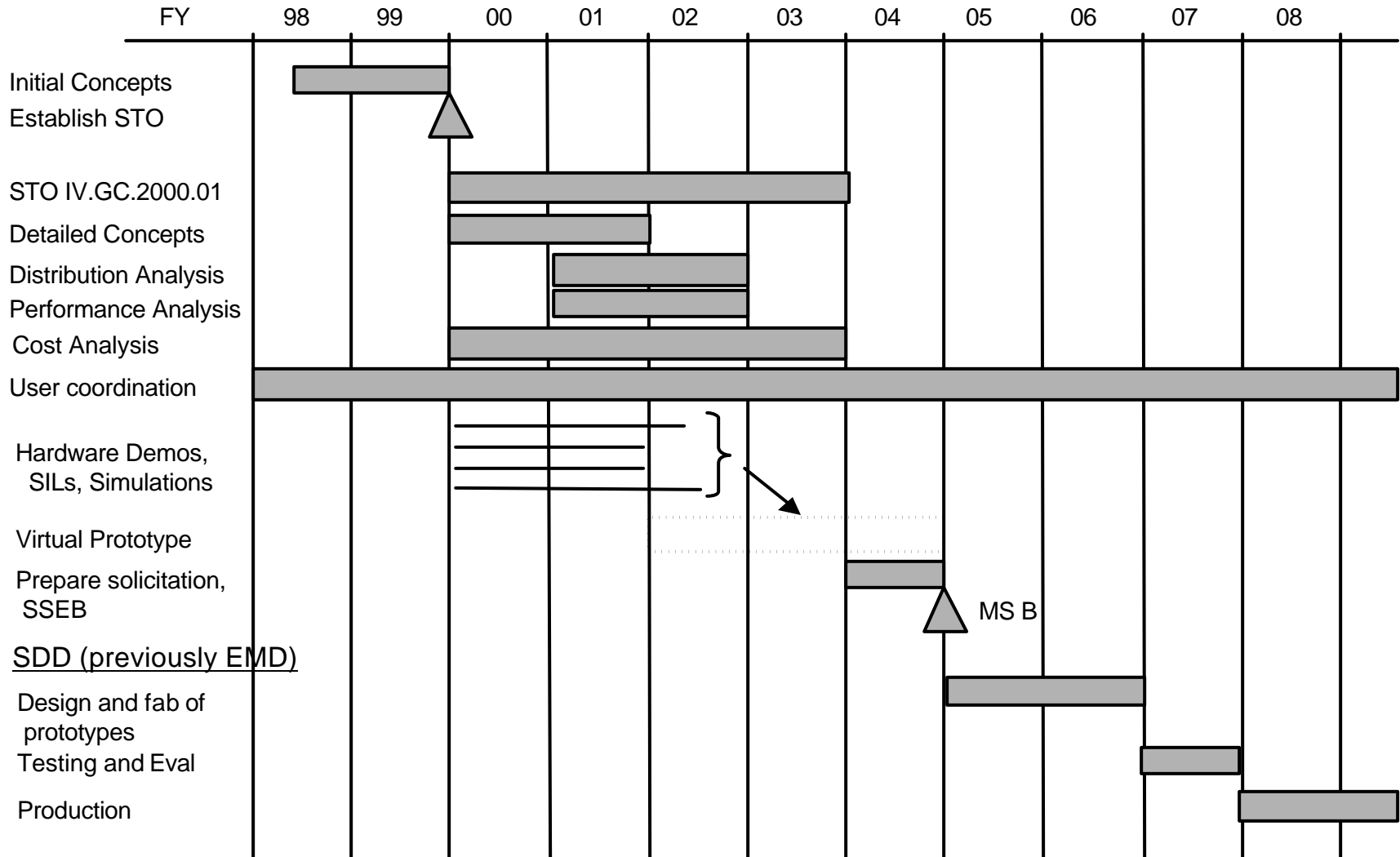
- 21<sup>st</sup> Century Truck STO in progress
- FTTS ICT Tier I Proposal approved 25 Oct 01
- Draft Scenarios and Concept, in Progress
- Draft Mission Needs Analysis (MNA)
- Milestones:
  - MNS in FY02
  - ORD in FY03
  - R&D funding begins FY04
- Initial Funding Line (HEMTT II)

	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	
OPA (\$K)	0	0	0	0	99900	239500	398600	398500	399700	396700	391700	394200	382400	
RDTE	6900	10018	11067	12081	0	0	0	0	0	0	0	0	0	





# FTTS Acquisition Schedule





# Summary



- The Transportation Corps is the Army's Spearhead of Logistics. We are designing the CS/CSS solution platform(s) which will meet all 21st Century future transportation and deployment challenges.
- The FTTS will provide the increased capabilities which will deliver the Objective Force and its sustainment in packages which will ensure speed, operational momentum and rapid throughput.





# Summary



## POC Information

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